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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named  
Inventor : Xueshi Yang et al.

Appln. No. : 10/771,813

Filed : February 3, 2004

For : PATTERN-DEPENDENT  
EQUALIZATION AND DETECTION

Docket No.: S01.12-1013

Group Art Unit:

Examiner:

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

I HEREBY CERTIFY THAT THIS PAPER IS BEING  
SENT BY U.S. MAIL, FIRST CLASS, TO THE  
COMMISSIONER FOR PATENTS, P.O. BOX 1450,  
ALEXANDRIA, VA 22313-1450, THIS

20 DAY OF May, 2004  
  
PATENT ATTORNEY

Sir:

The patents or publications listed on the enclosed PTO Form-1449 are submitted pursuant to 37 C.F.R. § 1.97. Copies of the patents or publications cited are enclosed.

**TIME OF FILING**

The information disclosure statement is being filed:

1. X with the application or within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, whichever event occurs last. In accordance with 37 C.F.R. § 1.97(b), no statement or fee is required.
2. \_\_\_\_\_ after the time period specified in paragraph 1 above, but before the mailing date of a final action under 37 C.F.R. § 1.113 or notice of allowance under 37 C.F.R. § 1.311. Therefore, in accordance with 37 C.F.R. § 1.97(c), submitted herewith is:

(check either A or B below)

- A. \_\_\_\_\_ a statement as specified in 37 C.F.R. § 1.97(e).

- B.        the fee set forth in 37 C.F.R. § 1.17(p) for submission of an information disclosure statement under 37 C.F.R. § 1.97(c).
3.        after the mailing date of either a final action under 37 C.F.R. § 1.113 or a notice of allowance under 37 C.F.R. § 1.311, whichever occurs first, but before payment of the issue fee. Therefore, Applicant petitions for consideration and submits herewith:
- A. a statement as specified in 37 C.F.R. § 1.97(e);
- B. the petition fee set forth in 37 C.F.R. § 1.17(p).

**STATEMENT**

(only used if No. 2(A) or No. 3 above is checked)

The person(s) signing below certify

(check appropriate paragraph)

       that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. § 1.97(e)(1).

OR

       that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. § 1.97(e)(2).

**METHOD OF PAYMENT**

  X   No fee is required.

       Attached is a check in the amount of \$      .

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123. A duplicate copy of this communication is enclosed.

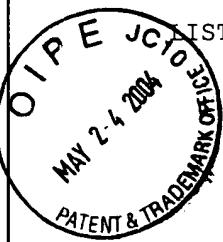
Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 

Judson K. Champlin, Reg. No. 34,797  
Suite 1600 - International Centre  
900 Second Avenue South  
Minneapolis, Minnesota 55402-3319  
Phone: (612) 334-3222  
Fax: (612) 334-3312

RMR/JKC/rkp

FORM PTO-1449	Atty. Docket No.: S01.12-1013/STL 11469.00	Appl. No.: 10/771,813
 LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	First Named Inventor:	
	Xueshi Yang et al.	
	Filing Date	Group Art:
	February 3, 2004	---

## U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
AA	6,201,839	03/2001	Kavcic et al.	375	341	
AB	6,438,180	08/2002	Kavcic et al.	375	341	
AC	6,460,150	10/2002	Cideciyan et al.	714	709	
AD						

## FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
AE						

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AF	Moon, J. and Park, J. "Pattern-Dependent Noise Prediction in Signal-Dependent Noise," IEEE Journal on Selected Areas in Communications, vol. 19, no. 4, pp. 730-743 (April 2001).
AG	J. Coker et al. "Noise-Predictive Maximum Likelihood (NPML) Detection," IEEE Transactions on Magnetics, vol. 23, no. 1, pp. 110-117 (January 1998).
AH	J. Caroselli et al. "Improved Detection for Magnetic Recording Systems with Media Noise," IEEE Transactions on Magnetics, vol. 33, no. 5, pp. 2779-2781 (September 1997).
AI	Kavcic, Aleksandar "Decision Feedback Equalization in Channels with Signal-Dependent Media Noise," IEEE Transactions on Magnetics, vol. 37, no. 4, pp. 1909-1911 (July 2001).
AJ	Nair, S.K.; Moon, J.; "Nonlinear Equalization for Data Storage Channels" IEEE International Conference on Communications, ICC '94, SUPERCOMM/ICC '94, Conference Record, Serving Humanity Through Communications, Vol. 1, pp. 250-254 (May 1994).
AK	Forney, Jr. David G, "Maximum-Likelihood Sequence Estimation of Digital Sequences in the Presence of Intersymbol Inteferece," IEEE Transactions on Information Theory, vol. IT-18, no. 3, pp. 363-378 (May 1972).
AL	Moon, J. and Zeng, W. "Equalization for Maximum Likelihood Detectors," IEEE Transactions on Magnetics, vol. 31, no. 2, pp. 1083-1088 (March 1995).

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
AM						
AN						

FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
AO						

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AP	Kavcic, Aleksandar, "A Signal-Dependent Autoregressive Channel Model," IEEE Transactions on Magnetics, vol. 35, no. 5, pp. 2316-2318 (Sept. 1999).
AQ	Moon, J. and Carley, R. "Performance Comparison of Detection Methods in Magnetic Recording" IEEE Transactions on Magnetics, vol. 26, No. 6, pp. 3155-3172 (November 1990).
AR	Glave, F, "An Upper Bound on the Probability of Error Due to Intersymbol Interference for Correlated Digital Signals," IEEE Transactions on Information Theory, Vol. IT-18, No. 3, pp. 356-363 (May 1972).
AS	Kavcic, A. and Moura, J. "The Viterbi Algorithm and Markov Noise Memory," IEEE Transactions on Information Theory, vol. 46, no. 1, pp. 291-301 (January 2000).
AT	Uehara, G. and Gray, P. "Parallelism in Analog and Digital PRML Magnetic Disk Read Channel Equalizers", IEEE Transactions on Magnetics, pp. 1-6 (November 1994).
AU	Nair, S.K.; Moon, J.; "Hardware-Efficient Nonlinear Equalizer and Its Performance" 1995 IEEE International Conference on Communications, ICC '95 Seattle, Gateway to Globalization, Vol. 1, pp. 653-657 (June 1995).
AV	Dumer, I. and Krichevskiy, R. "Soft-Decision Majority Decoding of Reed-Muller Codes," vol. 46, no. 1, pp. 258-264 (January 2000).

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U.S. PATENT DOCUMENTS

Examiner Initial	Document No.	Date	Name	Class	Sub Class	Filing Date If Appropriate
AW						
AX						

FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Sub Class	Translation Yes No
AY						

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AZ	Nair, S.K.; Moon, J.; "Simplified Nonlinear Equalizers" IEEE Transactions on Magnetics, vol. 31, No. 6, pp. 3051-3052.
BA	Nair, S.K.; Moon, J.; "Improved Equalization for Digital Recording Using Nonlinear Filtering and Error Confinement" IEEE Transactions on Magnetics, Vol. 30, No. 6, pp. 4221-4223 (November 1994).
BB	Nair, S.K.; Moon, J.; "A Theoretical Study of Linear and Nonlinear Equalization in Nonlinear Magnetic Storage Channels" IEEE Transactions on Neural Networks, Vol. 8, No. 5 pp. 1106-1118 (September 1997).
BC	
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BE	
BF	
BG	

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